Requirements for an undergraduate certificate may be completed at any campus location offering the specified courses for the certificate.

Program Requirements
To earn an undergraduate certificate in Geographic Information Science, a minimum of 12 credits is required.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 260</td>
<td>Geographic Information in a Changing World: Introduction to GIScience</td>
<td>3</td>
</tr>
</tbody>
</table>

Select 9 credits from:

- GEOG 361 Cartography–Maps and Map Construction
- GEOG 362 Image Analysis
- GEOG 363 Geographic Information Systems
- GEOG 365 Introduction to GIS Programming

Non-Course Requirements
Per University policy, all credit courses for a certificate require a grade of ‘C’ or higher, and at least two-thirds (2/3) of the credits used to complete a certificate must be earned at Penn State. If student is completing multiple certificates in Geography, no more than one (1) course may double-count for each.